20020501 FS6T500T

FIG. 1

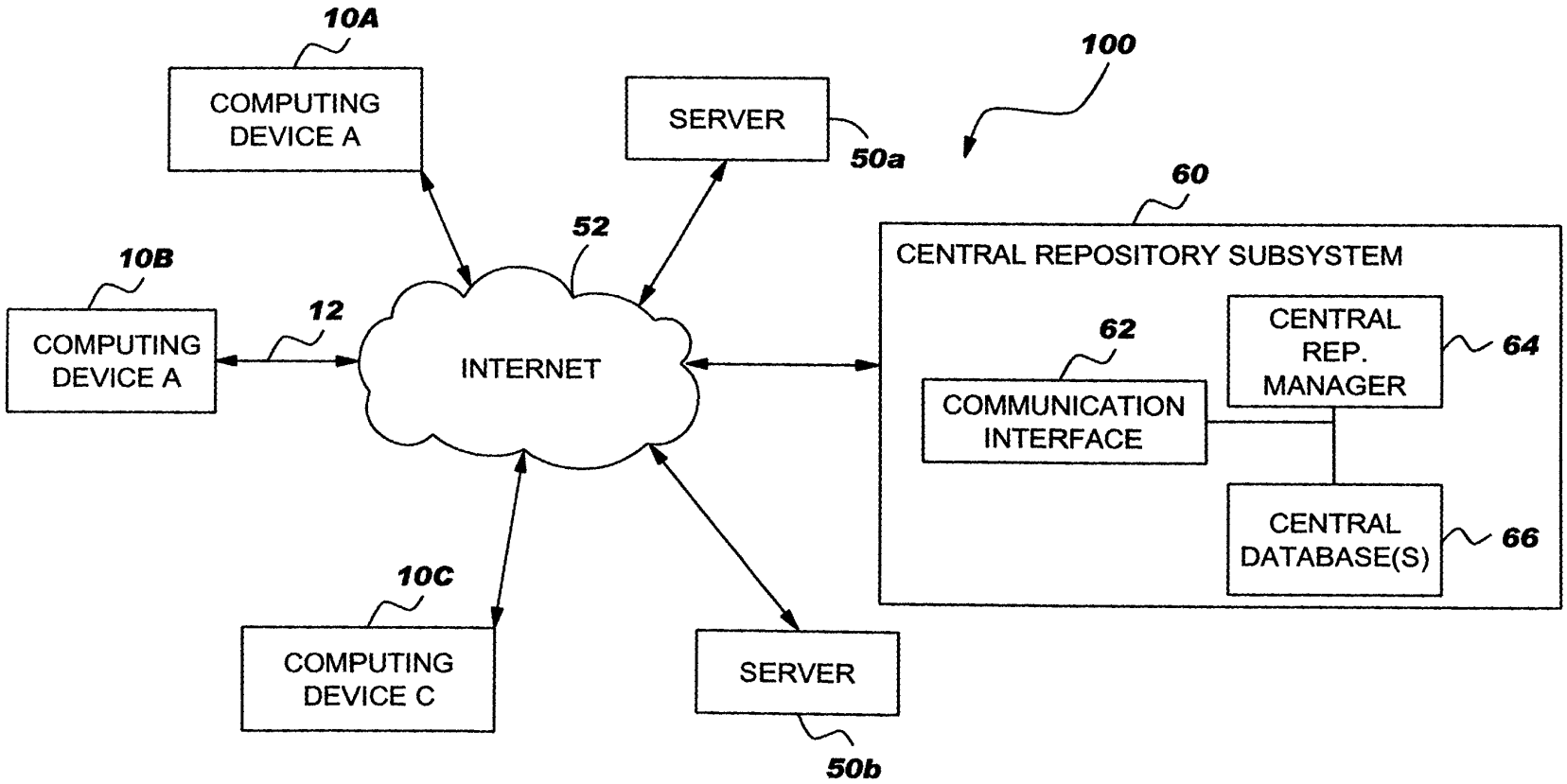


FIG. 2

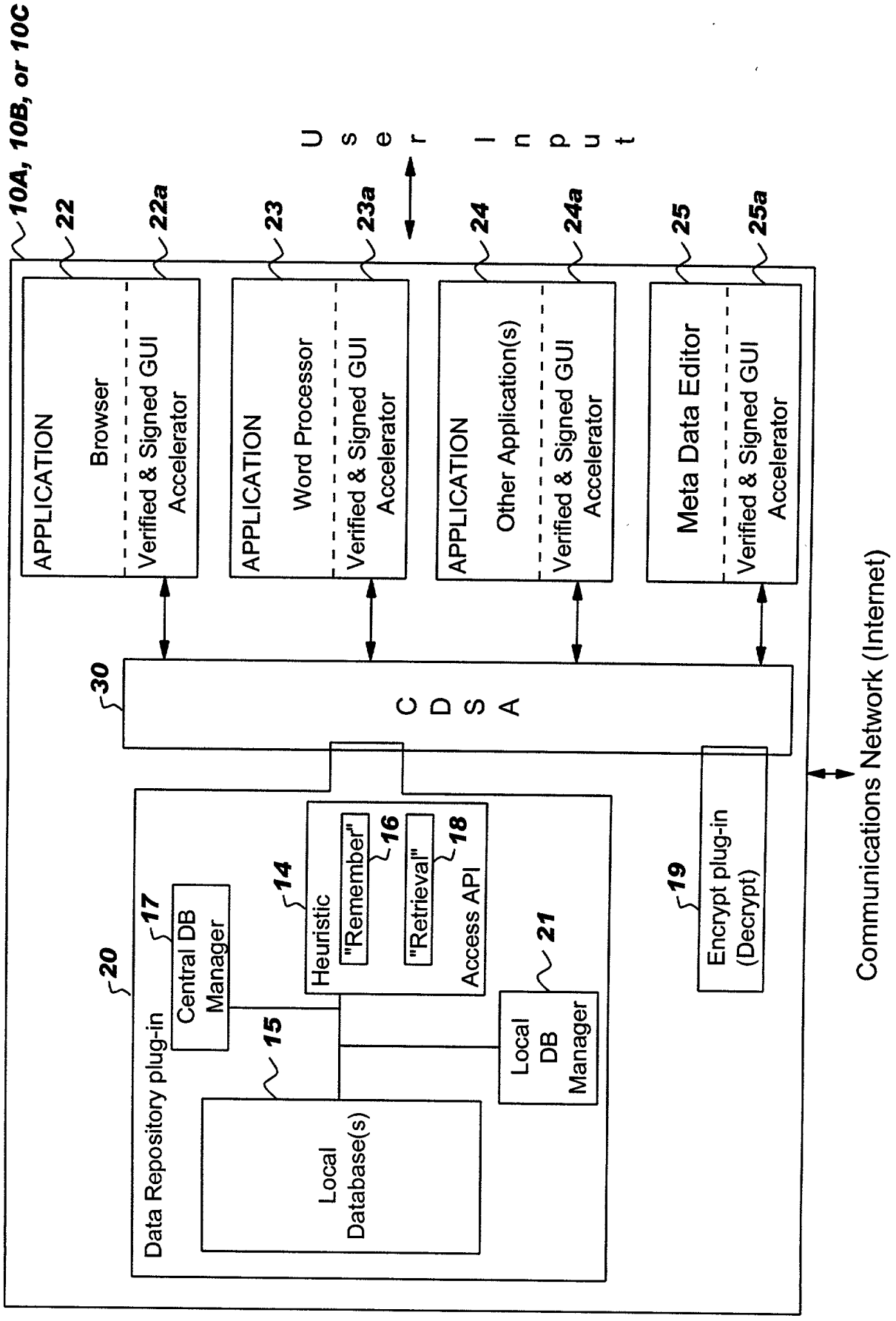

10A, 10B, or 10C
22
22a
23
23a
24
24a
25
25a
User Input
APPLICATION
Browser
Verified & Signed GUI Accelerator
APPLICATION
Word Processor
Verified & Signed GUI Accelerator
APPLICATION
Other Application(s)
Verified & Signed GUI Accelerator
Meta Data Editor
Verified & Signed GUI Accelerator
30
CDSA
20
Data Repository plug-in
17
Central DB Manager
14
Heuristic
"Remember"
16
"Retrieval"
18
Access API
21
Local DB Manager
15
Local Database(s)
19
Encrypt plug-in (Decrypt)
Communications Network (Internet)

FIG. 3A

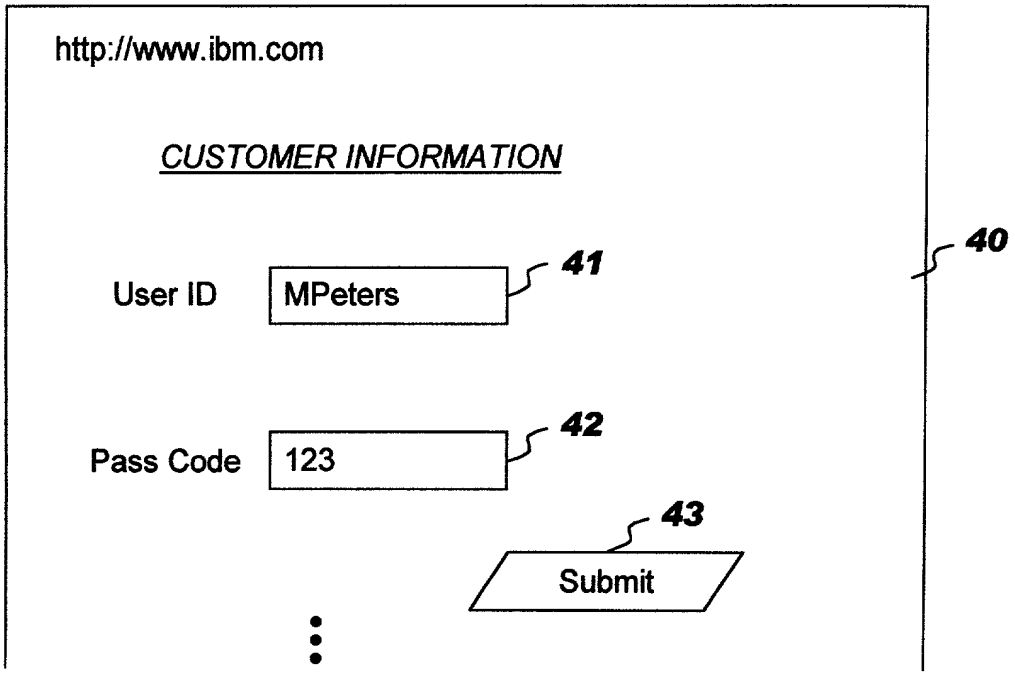

http://www.ibm.com
CUSTOMER INFORMATION
User ID
MPeters
41
40
Pass Code
123
42
43
Submit

FIG. 3B

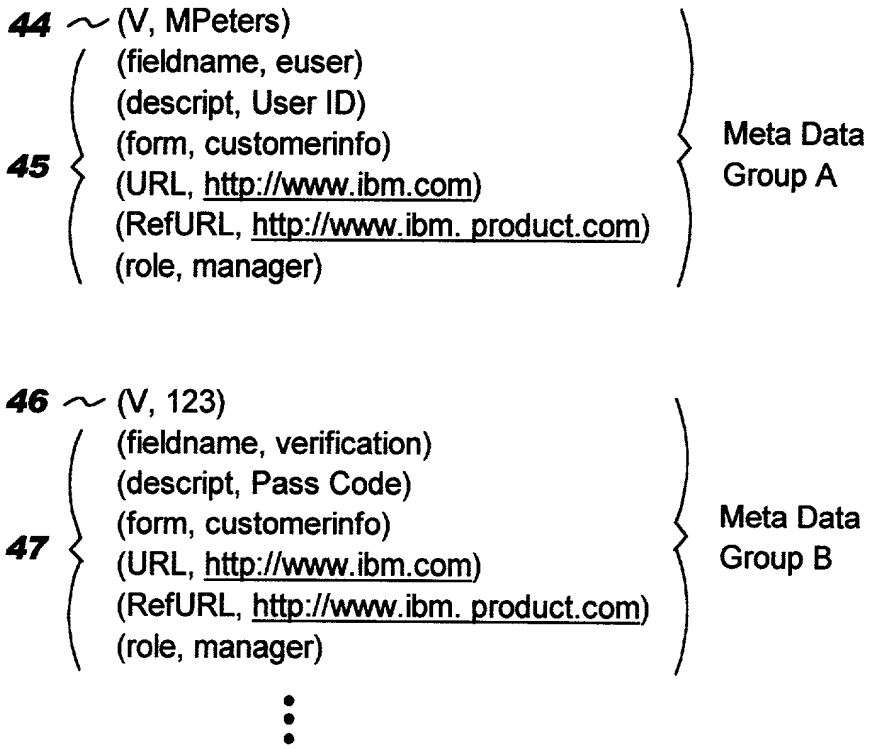

44
(V, MPeters)
45
(fieldname, euser)
(descript, User ID)
(form, customerinfo)
(URL, http://www.ibm.com)
(RefURL, http://www.ibm. product.com)
(role, manager)
Meta Data Group A
46
(V, 123)
47
(fieldname, verification)
(descript, Pass Code)
(form, customerinfo)
(URL, http://www.ibm.com)
(RefURL, http://www.ibm. product.com)
(role, manager)
Meta Data Group B

FIG. 4

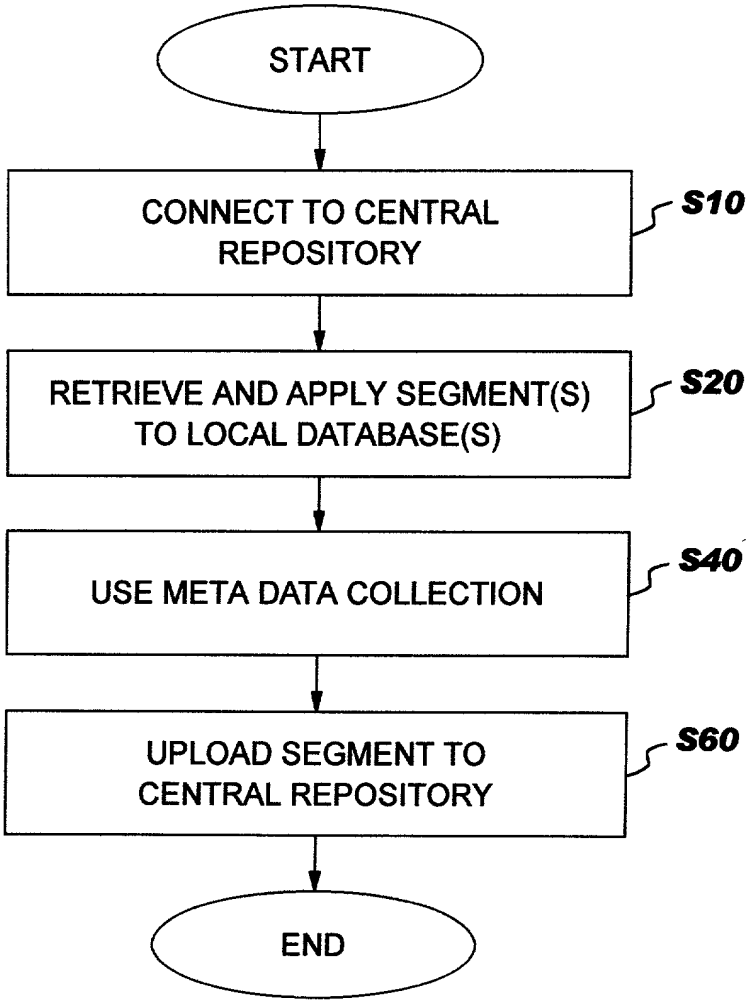

START
CONNECT TO CENTRAL REPOSITORY
S10
RETRIEVE AND APPLY SEGMENT(S) TO LOCAL DATABASE(S)
S20
USE META DATA COLLECTION
S40
UPLOAD SEGMENT TO CENTRAL REPOSITORY
S60
END

FIG. 5

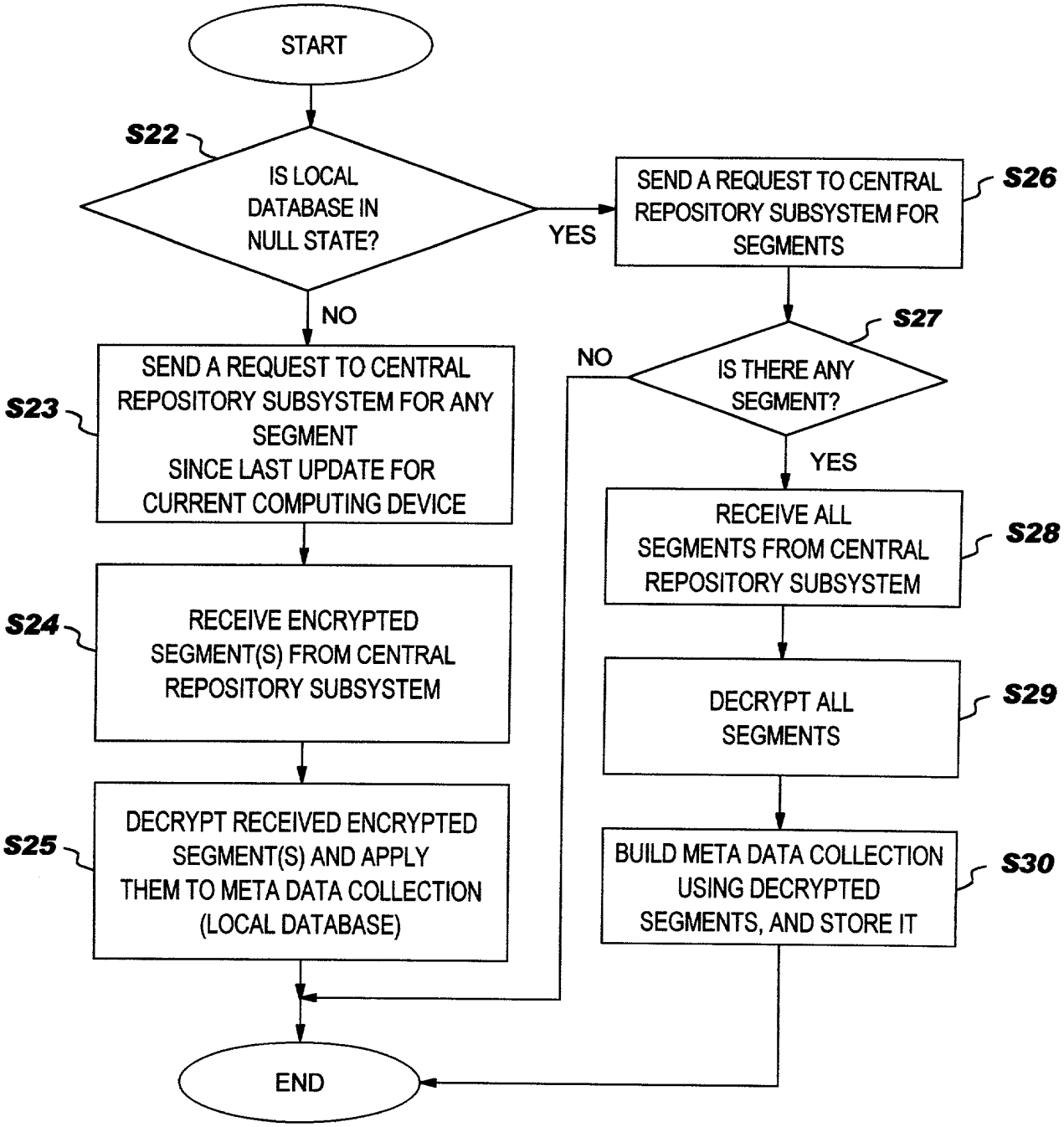

START
S22
IS LOCAL DATABASE IN NULL STATE?
YES
NO
S26
SEND A REQUEST TO CENTRAL REPOSITORY SUBSYSTEM FOR SEGMENTS
S27
IS THERE ANY SEGMENT?
NO
YES
S23
SEND A REQUEST TO CENTRAL REPOSITORY SUBSYSTEM FOR ANY SEGMENT SINCE LAST UPDATE FOR CURRENT COMPUTING DEVICE
S28
RECEIVE ALL SEGMENTS FROM CENTRAL REPOSITORY SUBSYSTEM
S24
RECEIVE ENCRYPTED SEGMENT(S) FROM CENTRAL REPOSITORY SUBSYSTEM
S29
DECRYPT ALL SEGMENTS
S25
DECRYPT RECEIVED ENCRYPTED SEGMENT(S) AND APPLY THEM TO META DATA COLLECTION (LOCAL DATABASE)
S30
BUILD META DATA COLLECTION USING DECRYPTED SEGMENTS, AND STORE IT
END

FIG. 6

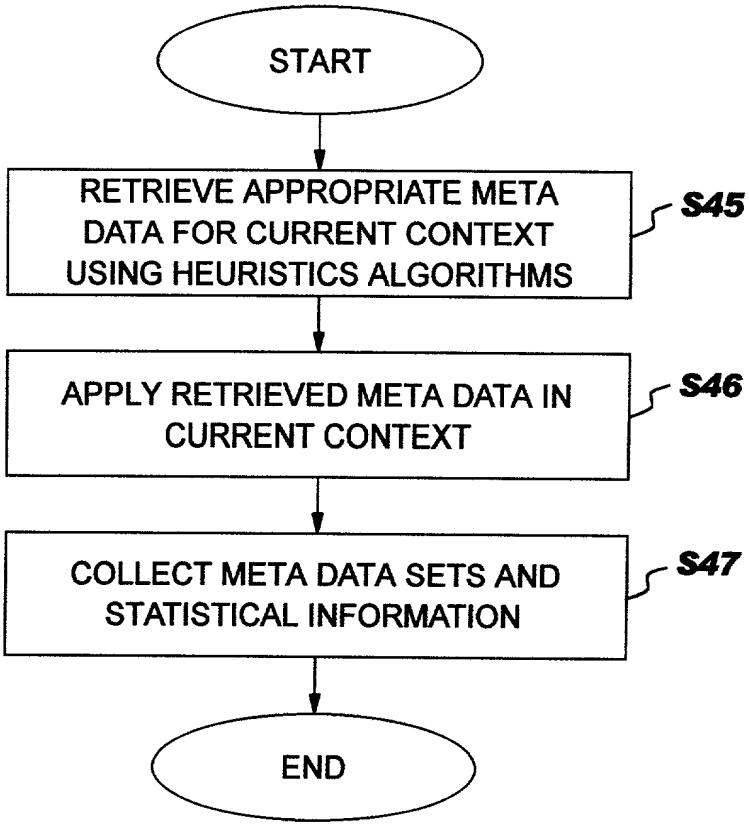

START
RETRIEVE APPROPRIATE META DATA FOR CURRENT CONTEXT USING HEURISTICS ALGORITHMS
S45
APPLY RETRIEVED META DATA IN CURRENT CONTEXT
S46
COLLECT META DATA SETS AND STATISTICAL INFORMATION
S47
END

FIG. 7

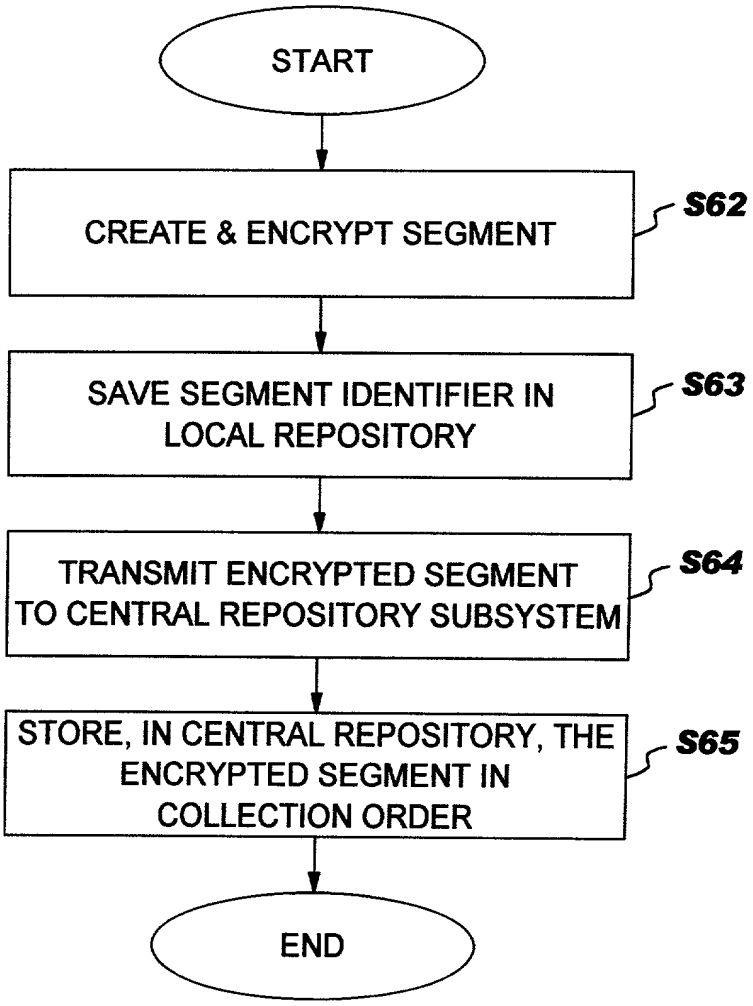

START
CREATE & ENCRYPT SEGMENT
S62
SAVE SEGMENT IDENTIFIER IN LOCAL REPOSITORY
S63
TRANSMIT ENCRYPTED SEGMENT TO CENTRAL REPOSITORY SUBSYSTEM
S64
STORE, IN CENTRAL REPOSITORY, THE ENCRYPTED SEGMENT IN COLLECTION ORDER
S65
END

FIG. 8

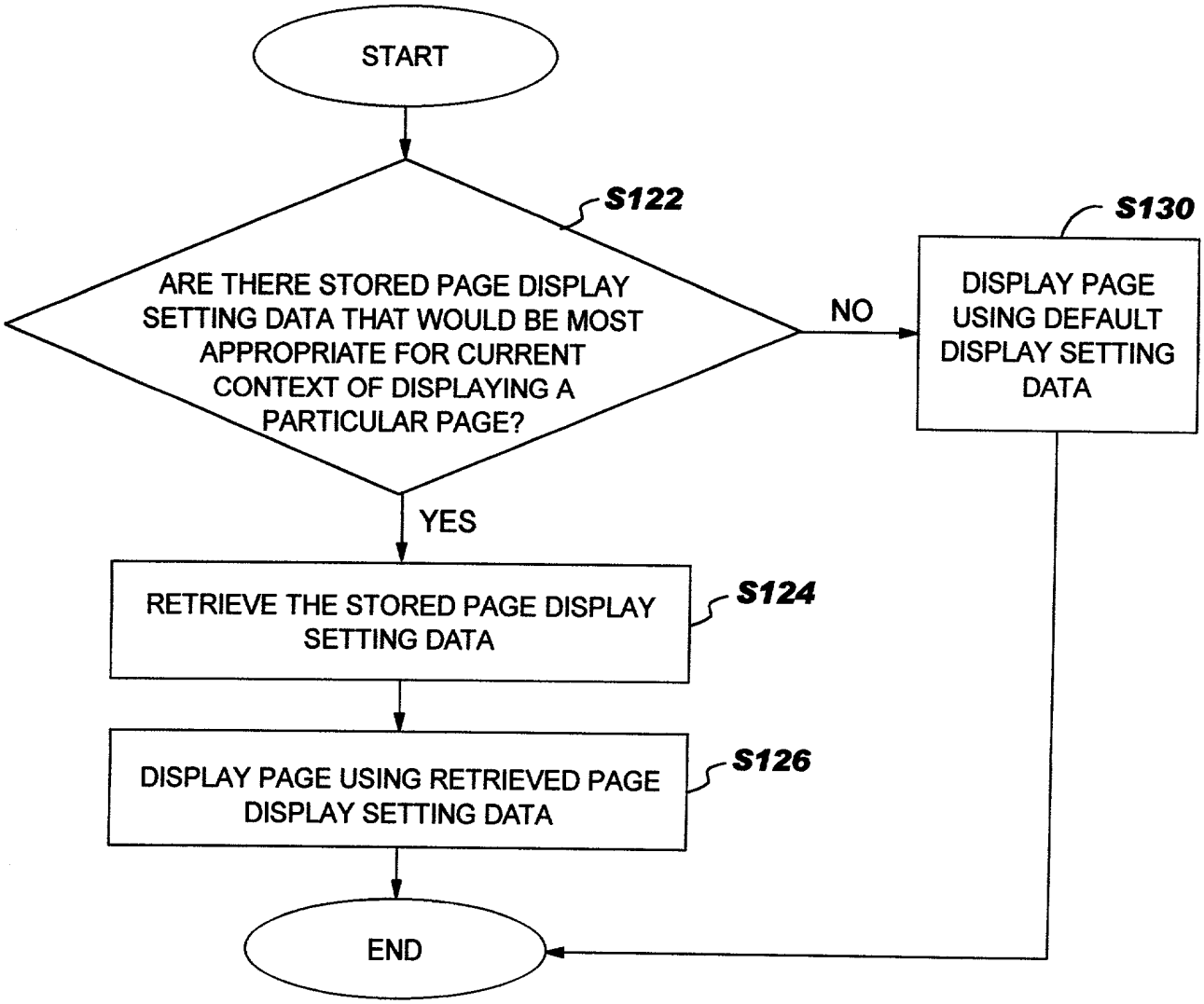

START
S122
ARE THERE STORED PAGE DISPLAY SETTING DATA THAT WOULD BE MOST APPROPRIATE FOR CURRENT CONTEXT OF DISPLAYING A PARTICULAR PAGE?
NO
S130
DISPLAY PAGE USING DEFAULT DISPLAY SETTING DATA
YES
RETRIEVE THE STORED PAGE DISPLAY SETTING DATA
S124
DISPLAY PAGE USING RETRIEVED PAGE DISPLAY SETTING DATA
S126
END

FIG. 9

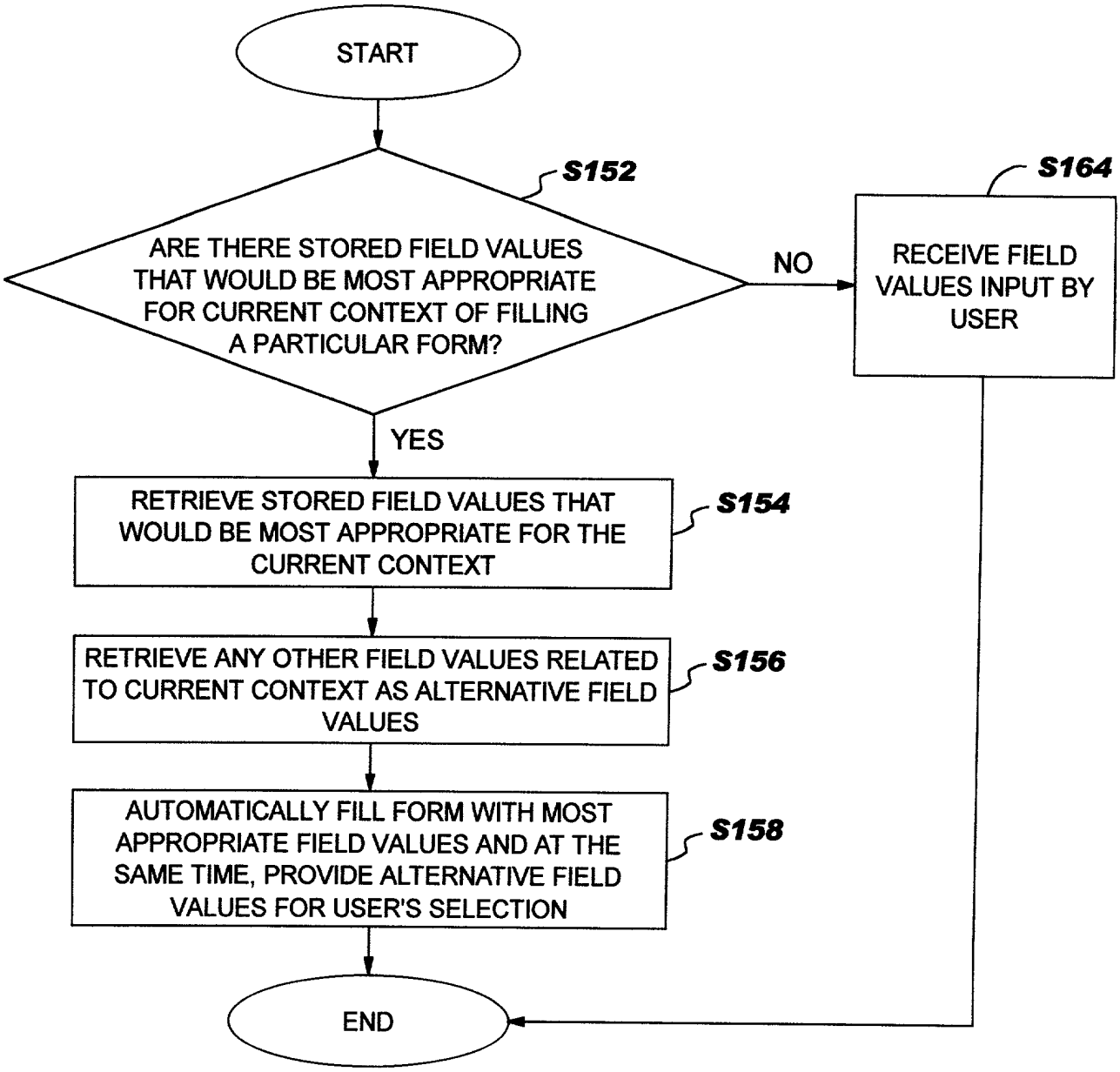
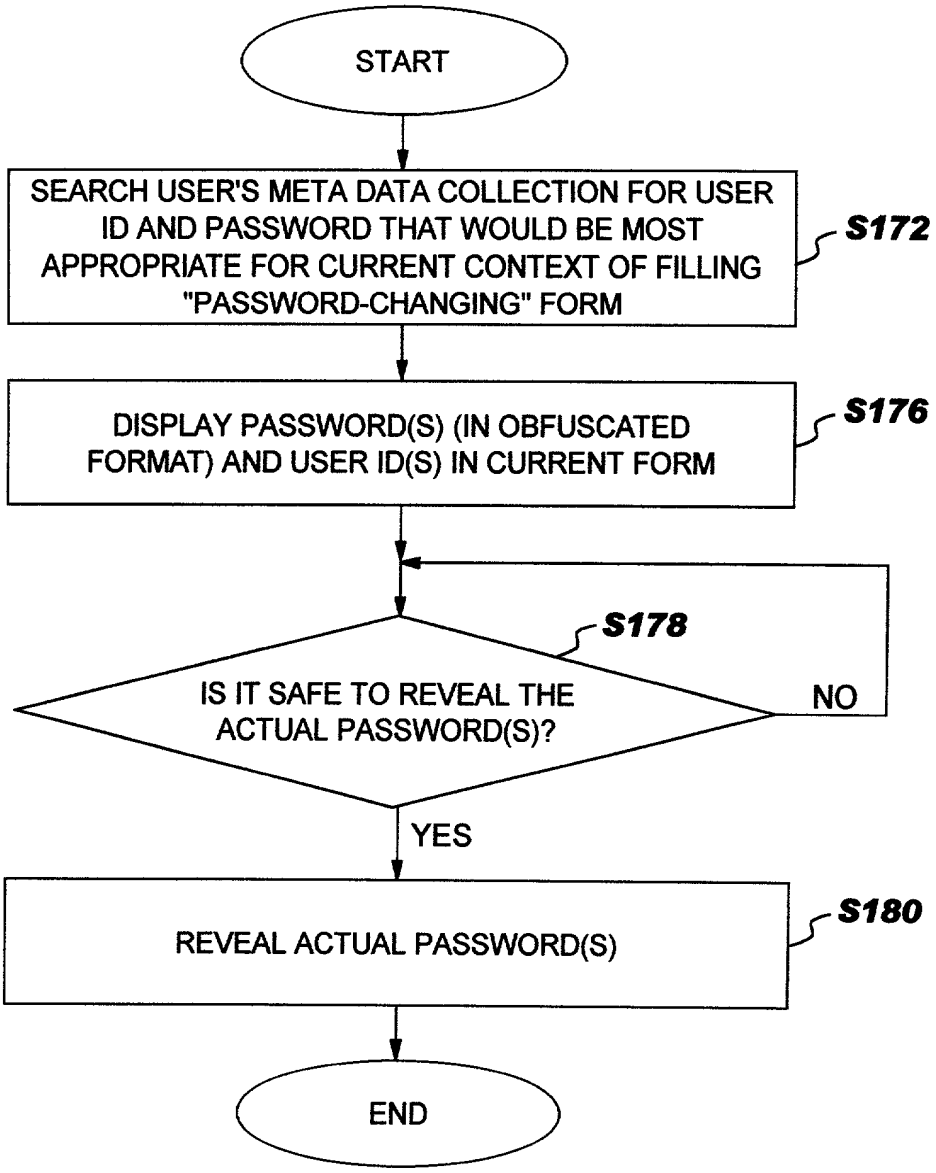

START
S152
ARE THERE STORED FIELD VALUES THAT WOULD BE MOST APPROPRIATE FOR CURRENT CONTEXT OF FILLING A PARTICULAR FORM?
NO
S164
RECEIVE FIELD VALUES INPUT BY USER
YES
RETRIEVE STORED FIELD VALUES THAT WOULD BE MOST APPROPRIATE FOR THE CURRENT CONTEXT
S154
RETRIEVE ANY OTHER FIELD VALUES RELATED TO CURRENT CONTEXT AS ALTERNATIVE FIELD VALUES
S156
AUTOMATICALLY FILL FORM WITH MOST APPROPRIATE FIELD VALUES AND AT THE SAME TIME, PROVIDE ALTERNATIVE FIELD VALUES FOR USER'S SELECTION
S158
END

FIG. 10


START
SEARCH USER'S META DATA COLLECTION FOR USER ID AND PASSWORD THAT WOULD BE MOST APPROPRIATE FOR CURRENT CONTEXT OF FILLING "PASSWORD-CHANGING" FORM
S172
DISPLAY PASSWORD(S) (IN OBFUSCATED FORMAT) AND USER ID(S) IN CURRENT FORM
S176
S178
IS IT SAFE TO REVEAL THE ACTUAL PASSWORD(S)?
NO
YES
REVEAL ACTUAL PASSWORD(S)
S180
END